

Frontier Analysis, Ltd

TECHNICAL SERVICE RESPONSE NO.: UT030

Subject: Analysis of a Glass-Like 'Rock' Fragment Found at a Purported UFO Landing Site in Poland

Date: January 21, 2004

Requested By: Nancy Talbott
BLT Research

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Analytical Scientist

Background/Objective: A rural area of Poland has experienced many unusual events possibly relating to UFO type activity for a number of years. Crop circles occur, and peasants see UFO-type craft and lights. One such event occurred several years ago when an old woman saw a brilliant light in the field by her home. She indicated it was associated with a craft that had with a craft that had oblong windows. She also saw entities. The craft was on the ground for several minutes. The next morning her grandson went into the field. At the site of the UFO landing he noted flattened plants and unusual 'rocks' that were fluorescing. He took one chunk home. The next day he went back with a wheel barrel for the rest of the 'rocks' and found they had disappeared. The chunk he did have continued to fluoresce for six months.

Nancy Talbott sent two fragments of the 'rock' along with four soil control samples to Nick Reiter for analysis. He received them on June 3, 2003. The fragments were photographed and appear black and shiny. He checked them with a Geiger counter and found no radioactivity. Then he exposed them to long and short wave UV and visually did not observe any fluorescence. The fragments were not attracted to a magnet. He did EDS elemental analysis and generally found a predominance of Si, majors of Ca, Al, Mg, O, C and minors of Fe and Ti. These are typical soil elements and suggested to Nick that the fragments are vitrified soil. But puzzling is the fact that elemental composition ratio does not compare to the four reference soils from locations around the site. This might suggest that the 'rocks' did not originate from the site.

On July 8, 2003 this laboratory received one of the fragments, via Nick Reiter, for additional infrared analysis.

Conclusions:

Infrared and microscopic examination of the stone by this laboratory shows the material is amorphous and a glassy Si-O containing material. Clearly the data supports Nick Reiter's conclusions that this is soil that has been vitrified.

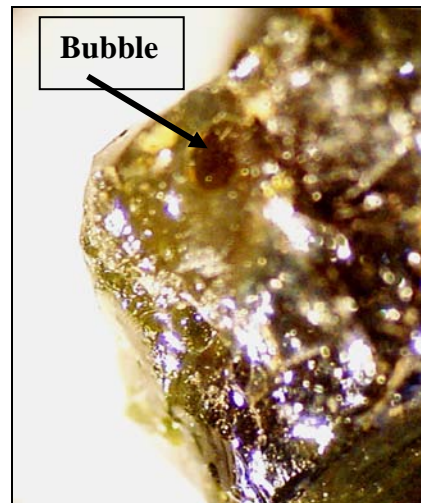
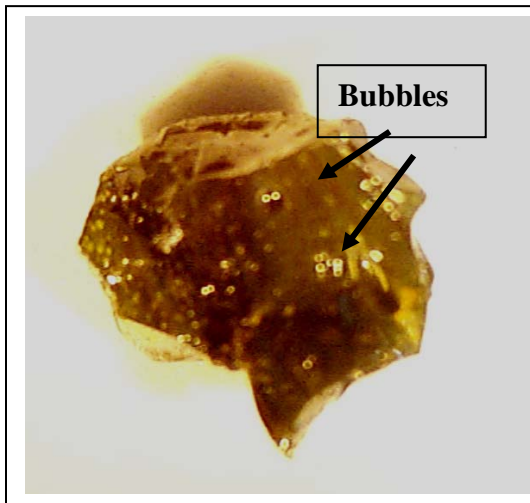
Procedure:

Black "Rock" fragment is approximately 9 x 7 x 2 mm and weighs 0.2358 grams.

An infrared spectrum was taken of a tiny amount of ground material removed from the fragment using the Harrick SplitPea™ accessory on the Nicolet Avatar 360 spectrometer. Stereomicroscope photographs were obtained using the Leika GZ6 microscope interfaced to a Kodak Digital Science MDS 120 camera.

Results:

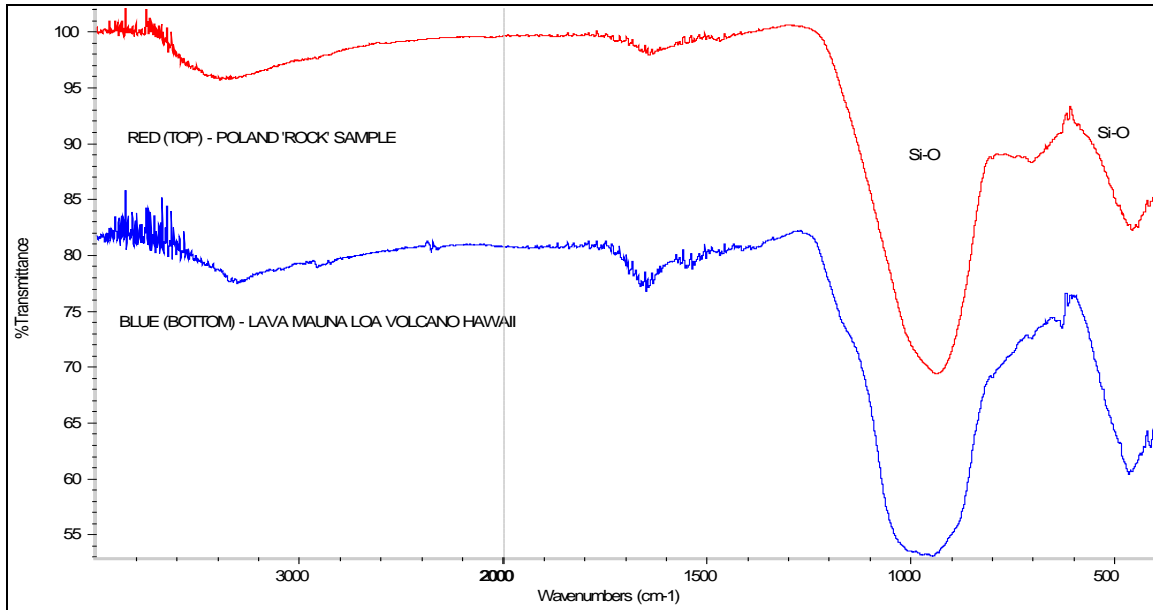
Microscopic analysis shows the material has a glassy appearance with some apparent bubbles. This would suggest the material has been exposed to a temperature high enough to cause "melting" of the mineral silicate in the sample. (See infrared analysis below on the identification of glass-like Si-O bonds and Nick Reiter's report¹.) Two microphotographs taken by this laboratory follow.



The infrared spectrum of the 'rock' fragment shows very broad absorption bands which are typical of an amorphous glass-like substance. The frequencies of the bands (between 1050-900 cm^{-1} and between 550-400 cm^{-1}) are definitely due to Si-O absorption. The spectrum is a close comparison to a spectrum of lava

¹ Nick Reiter's report on file.

which is rock that has experienced melting². These data suggest the rock fragment originally contained a high concentration of silica mineral (i.e. sand a.k.a. quartz) that has been subjected high temperature. Glass, manufactured from 75% silica plus other materials, requires temperatures of at least 700-800C (1300 – 1500F) to become glass³. Following is the spectrum along with a reference of lava for comparison.



Phyllis A. Budinger

Distribution:
Nick Reiter, Avalon Foundation

² Lava specimen is from Mauna Loa on the island of Hawaii.

³ Richard K. Lewis Sr., Hawley's Condensed Chemical Dictionary, Fourteenth Edition, John Wiley and Sons, Inc., 2002.